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Journal Item

How to cite:

Johnson, Mark R. and Woodcock, Jamie (2021). Work, play, and precariousness: An overview of the labour ecosystem of esports. *Media, Culture & Society*, 43(8) pp. 1449–1465.

For guidance on citations see [FAQs](#).

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Version: Accepted Manuscript

Link(s) to article on publisher's website:

<http://dx.doi.org/doi:10.1177/01634437211011555>

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Work, play, and precariousness: An overview of the labour ecosystem of esports

Johnson M.R., Woodcock J. (Forthcoming, 2021) Work, play, and precariousness: An overview of the labour ecosystem of esports. Media, Culture & Society. Online first.

Abstract

Professionalised competitive digital gaming or 'esports' has grown to a point where millions of dollars are being awarded in competitions watched globally by tens of millions of viewers. Previous analyses of the phenomenon have examined the role(s) of labour in esports performed by various actors – players, tournament organisers, sponsors, game developers – but these have yet to be unified into a 'big picture' of esports labour, especially when considering the relationships between the labour performed by different esports actors. In this paper we therefore present a comprehensive overview of the labour that different actors within the emerging Esports ecosystem perform, and how they intersect and influence each other in order to contribute to the existence of this highly contemporary phenomenon. In doing so we show that the rapid growth of Esports has created new labour processes and forms of work, transformed existing ones, yielded new career options, and tremendous profits to be made by a range of involved actors. Esports' emerging position as a major global industry both within gaming and within contemporary media more broadly demands close attention to its work, its workers, and who is winning and losing in this dynamic media space.

Introduction

Professional gaming 'esports' competitions are watched globally by tens of millions of people (Church, 2020; Spangler, 2020), showcasing the world's most skilled competitive gamers and offering prizepools of potentially millions of dollars (Takahashi, 2020), supported in turn by sponsorships with global companies including Intel, Coca-Cola, Red Bull, and T-Mobile (Meola, 2018). For game studies, esports is an important arena for understanding both the relationships between gameplay and consumption, as well as larger issues of labour, political economy, employment and marketing. Many 'gamers' increasingly aspire to a career in esports, drawing us to examine what sorts of labour are required to achieve this, and how the labours of others affect the larger esports ecosystems. For media studies more generally, esports represents a rapidly growing new domain of media production and consumption, yet one whose labour dynamics are only beginning to be understood, especially in comparison with 'traditional' or 'physical' sports. This makes it an exemplary area of study for understanding the dynamics of emerging media ecosystems, and in particular – the focus of this paper – how labour is created, bought, sold, and arbitrated, through often obscure or informal practices.

Some existing work on esports has focused on examining labour dynamics. Egliston (2016: 54) draws on existing theories of labour and play to show how the increasingly 'monetised state of professional gaming strongly represents an intersection of gameplay and labour'. In this way professionalised digital gaming labour 'now involves media production in esports' as well as 'the performance of being a professional player' (Kauwelo and Winter, 2019: 37; cf. Johnson and Woodcock, 2017a). Esports labour and its resultant spectator appeal now yield earnings for the most prestigious and successful competitors 'high enough that players need not have other jobs' (Parshakov et al., 2018: 5065). However, scholars have identified potential labour issues (Holden and Baker, 2019) stemming

in part from the observation that the esports labour model is 'disorganised', showing the general absence of leagues, the rapidity and informality of deals, and the limited 'bargaining power' of players (Li, 2017: 72). There consequently remain significant questions around 'labor, employment conditions [and] equal opportunity' (Holden et al., 2017: 47) within esports; as Agha (2015: 2) notes the 'value of immaterial labour is not always recognized' even by the player performing it, and thus 'may be exploited by other groups'. Given the large numbers of people keen to break into esports and thus flooding the 'digital labour marketplace', the power to negotiate of these individuals appears 'diminished when compared to the near total power of the games developers' (McCutcheon and Hitchens, 2020: 78). All these initial engagements with esports labour are extremely valuable yet a 'big picture' overview remains elusive, particularly when it comes to the connections between the different kinds of online (and offline) labour practices. And with so much taking place online, in informal contexts, or otherwise blurring working and non-working hours, the labour of both players in and owners of esports teams can sometimes be 'hard for outsiders to recognize' (Taylor, 2012: 151). What emerges here is an image of a sector yielding significant profits and financial opportunities for some, yet remaining highly informal, opaque and wrought with potential labour disputes and exploitation.

In this article we focus on the labour in esports, but from a perspective of the entire esports ecosystem. Our goal is to consider the different motivations, agendas and interests of the various actors, examining where they cooperate, where and how they compete, and the unequal distribution of power across and within these labour relations. This will allow us to offer a view of esports labour that emphasises interconnectivity, dependencies, and tensions, rather than focusing specifically on labour phenomena within just one aspect of esports. We first consider the developers of esports games, up to and following a game's release. We then explore the organisational and technical labour required for successful esports events; the roles of advertisers and sponsors, and their relationships with other actors; the importance of esports broadcasting and broadcasters; and the essential contribution of streaming by both professional and non-professional players, and therefore the distributed labour that streamers perform. The second half of the paper focuses in on the experiences of the professional video game players themselves, who are both the most important aspects of the ecosystem and, we argue, its most exploited. We explore the precariousness of these labour experiences and argue that precariousness characterises both the labour experiences of esports professionals and the shaping of the wider domain. We conclude by summarising the forms of labour within esports, arguing that these labour dynamics must be central to any properly critical appraisal of the esports phenomenon. Esports' position as an emerging media industry, and an increasingly integral element of digital gaming culture and the global games industry and economy, demands a thorough high-level analysis of its labour practices, and its winners and losers.

Methodology

A mixed methods approach is used to examine the labour relationships in esports, drawing on online and offline interventions, and considers both the 'public face' of esports (competitions, broadcasts, media reporting) and 'behind the scenes' (interactions between individuals, the lives of these individuals, careers of esports professionals). Online, we studied over 200 hours of broadcast games on live streaming platform Twitch, many of which involved esports broadcasting. We observed the skilled labour of the players, the skilled labour of esports commentators, the reactions from viewers to gameplay moments and hosts' comments, and the roles of advertisers and sponsors. This information has shed significant light on the work of those who constitute the public face of esports,

and the relationships between their forms of labour (players and commentators, for example), and the factors that determine if individuals rise (cf. Johnson & Woodcock, 2017a) or fall.

Offline, we drew upon extensive interview research and ethnographic observation. We attended eight major esports events or events with a significant esports presence in the US and Europe, accruing several hundred hours of ethnographic observation, both as 'ordinary' attendees or spectators, and through behind-the-scenes access generously granted by Twitch and the ESL (Electronic Sports League). At these events we conducted approximately 100 interviews with professional games broadcasters (a number of whom were directly involved in esports) as data collection for a larger project of which esports was one element, as well as interviewing esports commentators in particular. These covered a wide range of individuals involved in diverse aspects of esports and hailing from a range of demographic backgrounds. We draw on comments from ten of these interviews in this paper. We refer to these interviewees as Rx, where 'R' stands for 'Respondent' and x is their unique identifier (1–10 inclusive). These interviews were coded iteratively using a grounded theory approach, allowing themes and concepts to emerge organically from the data and minimising the risk of researchers' preconceived notions. This technique established the divisions of labour we explore below, and the main themes in our respondents' comments, including long working hours, precariousness, the interweaving of different kinds of labour, the emergence of new forms of labour and the transformation of older forms.

The labour of esports game development

We begin by exploring the labour required to both produce, and maintain, an esports game. The costs of computer games production, prices of sold games, and the size of game development teams have risen considerably in recent years. The publisher Activision invested USD 500 million as a long-term commitment to the Bungie's *Destiny* (2014–Present) series franchise (Makuch, 2014). *Grand Theft Auto V* (2013) cost more than USD 250 million to develop and market, but made more than USD 1.5 billion in sales (Chiappini, 2013). The size of the stakes and potential profits in the blockbuster or 'triple-A' (expensive games with large teams) games industry are clear. This is reflected in the size of games companies; many now have hundreds of employees across a wide spectrum of specialised roles. As Dyer-Witheford and De Peuter (2009: 4–5) explain, a game's 'development [. . .] involves the advanced technological skills necessary in making hardware and programming software, the affective skills of many kinds of artists, from animators to musicians to concept designers'. The labour process of game development is shaped for many by the dominance of publishers in the value chain, who sit between the game developers and the placement of their product into digital and physical storefronts (Toivonen and Sotamaa, 2010). This is a recognisable picture from other sectors – 'power asymmetries' along the value chain along with 'market pressures around cost and flexibility' are 'reflected and reproduced in capital–labour relations within firms' (Thompson et al., 2015: 7 – and has resulted in a growth of precarious contracts for software workers and developers (Bergvall-Kåreborn and Howcroft, 2013). Almost all games played at an esports level are 'triple-A' games, requiring large investments of time and capital, which serve to both reinforce these kinds of labour scenarios, and even make them seem a 'natural' part of the competitive games production process.

Customarily, the release of a computer game signals the end of most of the technical labour; once the product is 'out there' support tends to be reduced to a low level. Esports are different. Esports game developers continue through the life of the game to carry out regular labour processes associated with data analysis and 'patches' (incremental downloadable updates to the game). Data

analysis involves the acquisition of information on player behaviour: time spent in game, use of characters or items in game, victories and losses with these items, actions-per-minute (Lewis et al., 2011), and any failure points where the game has ceased to function as intended. This generates large volumes of data on potentially millions of players in hundreds or thousands of statistical categories, and is an influential means for esports players to shape back the esports games developed. The data analysis requires labour, and this in turn leads to the creation of patches, which are essentially new or amended versions of the same game that players must download (for free) in order to continue playing. Patches adjust balance aspects of the game based upon the acquired data and remove any critical technical or design issues in order to keep the game viable as an Esport. The introduction of patches also affects workable in-game tactics and strategies, thereby becoming part of the labour processes required to maintain a compelling playing experience and viewing spectacle. This constant and ongoing labour by game developers intersects closely with the labour of players, who continue to explore the game's possibilities and discover elements that might tip gameplay balance. Labour in esports game production is therefore not temporally-bounded, but ongoing, and deeply interwoven with several of the other forms of labour we explore in this paper. These two forms of labour – ongoing production, and constant iteration – form the technical basis of an esports game. But how is the technical artefact this produces and maintains transformed into the spectacle, and the site of thousands of careers, that is esports?

The labour of organisation and technical skill

Although ensuring the calibre and integrity of a game is crucial, the value of an esports game is only fully realised when it is played in tournament contexts. Each year thousands of esports tournaments are held, many in chains of tournaments weeks or months apart and across different countries, such as the Starcraft 2 'Pro League' which takes place over many weeks in South Korea (KeSPA, 2016), or the ESL 'ESEA' series in locations as diverse as London, Cologne, and Dubai, as well as online (ESL, 2016). As in traditional sports different esports have different sets of tournaments, different organisers, different sorts of prize pools and sponsors and so forth, with little universality between game disciplines. Thinking critically about Esports tournaments and the patching explored in the previous section, these can both be understood as forms of maintenance requiring the continuing iterative technical labour of game developers and tournament organisers (who are sometimes, but not always, game companies). Maintenance attempts to structure and stabilise physical materials and human competencies (Denis and Pontille, 2015) into an order that can be repeated and predicted across time and spatial contexts. Such order – in this case the regularity of esports tournaments, broadcasts, rankings, competitions, and the establishment of a sense of stability and predictability to these events and their scheduling and prizes – is always ephemeral, and requires constant renewal and repetition (Denis and Pontille, 2015; Orr, 1996; Strauss, 1978) through data analysis, game patching, at least moderately-successful anti-cheating regimes, the regular hosting of tournaments, and the establishment of routines and schedules for professional players and the other actors involved. These ordering processes provide the structural conditions necessary for professional gaming, and involve significant labour in a range of digital, physical, and geographic contexts.

Esports is hence an industry built around organising professional games competitions. While a few look to mirror Olympics-style sporting competition, such as the 'World Cyber Games', most tournaments are focused on a single game, even if some companies host tournaments in a range of different games. One of the biggest companies in the esports market is the ESL or Electronic Sports League, with headquarters in Germany and subsidiaries in North America, European, China, and the

UK, which provides studio facilities – with space for live viewing and technical equipment to stream – for competitions to be held. ESL recruitment drives offer insights into the kinds of labour involved. In 2016, ESL recruited from TV, IT, finance, sales, web development, marketing, events, and social media (Turtle Entertainment, 2016). We see here the translation of pre-existing forms of labour into a new industry. For example, the labour processes that are needed to broadcast a live sports show – camera people, editors, producers – are being transferred into an esports context, enabling the continuation of established labour forms within new employment settings. These roles and skills are one element of transforming a game from technical artefact (however well-maintained) into something around which numerous meanings are constructed, circulated, and broadcast.

Professional esports workers see these labour functions as crucial. Respondent R1 spoke about the behind-the-scenes labour that went into organising and maintaining esports play, explaining that one of their roles was to ‘run our national qualifiers [. . .] where we’ll have between 50 and 100 signups every night. I manage that and make sure it runs smoothly’. These are small events designed to ‘feed in’ to the larger and higher profile events seen on live broadcast or recorded YouTube videos, and are essential to constructing an ecosystem embracing all levels of skilled competition. R1 also ‘work[s] with studio shows bringing commentators in, coordinating the national championship teams. . .’. This means liaising between the ‘talent’ – the players – on each team and the commentators (whose labour we explore later) who need to speak about those players in an informed, natural, and easy manner. R1 noted that many of their technical staff – lighting, sound, and so forth – had backgrounds in theatre and stage management. R2, in a related vein, noted that ‘it’s uncertain precisely where the industry is going, whether it’s going to television or not’, but that any such shift would affect the kinds of skills and talents needed. Respondents emphasised the importance of this behind-the-scenes work, which draws on existing forms of labour, while also pointing to the evolution of these labour forms within the changing wider scene. We also see here commonalities with, but also differences from, the media systems surrounding ‘traditional’ sports.

Alongside the transformation of existing and recognisable labour processes, entirely new kinds of work are also being created, responding to new challenges, such as the difficulty of producing a video feed featuring all the important action in a game that lacks a single point of focus. Unlike traditional sports like football, in which the ball acts as a clear centre of attention, in esports the play is instead distributed across a wide map. For League of League, Riot Games (2016a) hires esports broadcast observers for the LCS (League Championship Series) tournaments, who must be highly ranked and skilled in the game. The job involves using ‘high-level game knowledge to look for those high-impact plays for instant replays and highlight reels that’ll run after’, all while ‘coordinating on the fly with a world class production team’ – in other words, this requires a deep knowledge of the game in order to respond to (and even predict) interesting gameplay occurrences that the camera should focus on. Such labour relies necessarily on an intimate knowledge of the game, its continuing developments, and its current dominant player strategies.

The labour of advertising, sponsorship, and third parties

Labour in the esports ecosystem is also performed by a range of third-party individuals or organisations who support esports players and teams. Companies have become essential sources of income for the professional gaming industry, with an emphasis upon corporations whose purchaser demographics are viewed as congruous with the demographics of the professional gaming viewing public – common sponsors are technology and software companies, energy drinks and snacks, and gaming and geek news and media outlets. These serve either as advertisers, or sponsors, or both.

The ecosystem also contains professional gaming organisations such as Evil Geniuses, Fnatic, Cloud9 and Virtus.pro, who field players in a range of games and provide services like hardware and software, networking, producing broadcasts, developing esports brands, and provide players with managers and coaches to support and develop individuals and teams in much the same way as a traditional sports manager. Many of these team activities in esports are supported by taking a percentage cut of players' earnings. The presence of advertisers, sponsors, managers and coaches serves also as part of the broader legitimisation of esports as a 'sport' (cf. Seo and Jung, 2016; Taylor, 2012; Wagner, 2007). It remains debated to what extent traditional models of 'sport' can apply to 'esports' (Jenny et al., 2017) both in terms of definitional and terminological questions, but there are some (e.g. Kane and Spradley, 2017) who are increasingly pushing for esports to be recognised as a 'sport' activity. Nevertheless these individuals, practices, and business networks, traditionally associated with physical sports, help to position esports as a legitimate competitive physical and mental activity, thereby widening the networks of esports capital and labour into new markets and job specialisations.

It is not difficult to see the commercial appeal of esports. With changing user demographics and media consumption patterns, previously well-tested methods of reaching potential media customers are becoming less effective. Branding from computer companies has become widespread within esports, such as the highly-visible 'Intel Extreme Masters' Series. Non-endemic brands also recognise the potential and are getting involved – Red Bull has become a regular feature in tournaments, alongside Coca-Cola, Nissan, and film companies promoting new blockbuster releases. The future possibilities of labour in this area are complex and hard to predict: R3 suggested that if companies begin buying individual broadcasters or hosts, rather than sponsoring teams or tournaments, that will 'change the way tournaments [work]', although precisely how remains 'too hard to predict at the moment' (R3). This was echoed by R4, arguing that with 'bigger production companies getting into the industry', alongside 'NBA players investing into esports', there 'will come a day when companies such as ABC [and] CBS [. . .] will get involved in this scene'. However, although advertising and sponsorship are beginning to respond to the new challenges of changing demographics of users and consumption, and to make their presence felt within esports, professional gaming is unlike traditional media spectacles. We next examine some new dynamics – specifically the emergence of the 'professional esports host' as a career, and the distributed labour performed by those of all skill levels who broadcast their own play of esports games.

The labour of broadcasting and streaming

Esports events vary in attendance and visibility, but all events above a certain size are broadcast, most often live on highly popular live streaming platform Twitch. Esports broadcasting generally takes one or two forms – a broadcaster is either a 'play-by-play' host, in which case they describe the detail of the on-screen action, or a 'colour commentator', in which case they seek to fill in gaps by offering statistics, information, amusing comments, questions for the play-by-play host, and so forth. Many esports pair broadcasters in this way and have found this model, which originated in traditional sports, to be highly successful. This broadcasting and hosting labour has been integral to the rapid success of esports: 'in the beginning casters worked [in a] more casual [manner], there wasn't a lot of professional production behind it. Now [. . .] larger companies like ESL [are] going out of their way to make sure it's the highest calibre of production that they can put out, and I think that has really helped the growth massively' (R5). Whereas esports originally involved casters who were simply 'there' and interested, the esports caster/host has now become its own differentiated career with its own dynamics.

R6 helped shed light on broadcasting work. Describing whether aspirants make it or not, they explained that candidates are 'literally thrown onto a stage, and if they work: great, they're in esports. They're awesome. They're new, they're brilliant, we love them' – but if they are unsuccessful at first audition, they are unlikely to get a second chance, so intense is the competition and therefore so consequential the opportunity. They also noted that the labour is not all about skill, ability, or hard work, but has an affective dimension too: 'you do need the right voice, you need the right look, and sometimes no matter how hard you work, you might not actually succeed'. R7 stressed, 'it doesn't matter how tight you are technically. It's also a popularity contest [and] if you can't handle that, then you're not going to make it as a caster'. We see therefore two aspects to the labour of casting. Casting is a traditionally skilled and almost technical act, requiring a deep knowledge of the game and teams in question, and the ability to deliver this knowledge at appropriate times, respond to action on-screen, and generally be able to keep up with the rapid flow of esports games. At the same time, casting also has an affective dimension (cf. Woodcock & Johnson, 2019): one must work to be liked by the fans of the game. Further research into how fans can shape, through collective action and sentiment, the broadcast of esports games would be valuable.

Casting is also time-consuming and exhausting. R8 explained that as a broadcaster, 'you work these events, the hours are pretty crazy. You are up pretty early, you work [. . .] pretty late [. . .] it's on camera, it's on air. It's pretty draining'. Other interviewees described what it took not just to achieve a successful broadcast (and being liked), but also the essential work required before the broadcast. R9 stated that 'you've got to prep[are for] the game you're playing: the teams, obviously, that are there; the individual players; the history of those players; the achievements of those individual players; any head-to-heads those players have had; any head-to-heads the teams have had'. Having all this information about players and teams is not enough, however, due to the constant moving of players in and out of teams in esports (at a far faster rate than in most professional sports). It is not enough to follow teams and the successful caster must also keep a close track of individual careers. Equally, if a broadcaster needs to broadcast an event centred around a new game – a game which either has no existing broadcasters, or a game looking to build its popularity by using a well-known broadcaster – significant preparation is required. R10 stated that 'for the [new game] I had a two day event [to get ready for], and I studied for two and a half weeks', whilst other respondents made passing comments throughout their interviews about how many games they knew in detail, how long it took to learn new games, and their choices to specialise in certain games rather than others. Although on-screen casters (as with all those who commentate on any kind of professional competition) almost always appear relaxed and confident, this data highlights how much off-screen labour is required to pull off a successful broadcast, and that this labour is intermeshed with other aspects of the esports ecosystem, including the development and evolution of games, the careers of professional players, and changing team compositions.

As well as the paid labour of broadcasters and others, esports also relies on unpaid labour arising from its broadcast medium. The live streaming platform Twitch is one of the highest websites in peak traffic in the United States (Burroughs and Rama, 2015: 2), with over 100 million regular viewers and over two million regular broadcasters (Twitch, 2017), with both numbers climbing since the start of the Covid-19 pandemic. Streams attract viewers through the performative labour of players, involving a live dialogue with the viewers through the text chat function, microphones and webcams. The development of Twitch is important to our understanding of esports labour for three reasons: first, it provides a way for spectators to engage with the game and learn how to compete at higher levels; second, it has created a new form of labour that provides a way for esports players to become professionalised and focus full-time on the activity; third, it is creating a new cultural

phenomenon in which streamers are becoming aspirational celebrity figures for new players (Johnson et al, 2019). Egliston (2016: 36) notes how esports makes 'permeable the boundaries between play as leisure and play as labour' through these kinds of relationships between amateur and professional players. The playbour that streamers perform raises the profile of the game, the visibility of new tactics, the size of the competitive scene, and more besides. Professional esports casting and playbour are distinct but essential elements of the esports labour ecosystem. It is, however, unclear precisely where questions of rights, ownership and intellectual property sit vis-à-vis the live-streaming of games, especially if a sponsored player is streaming their content for free. Observing this area in the future will, we believe, be an important site for understanding the valuation and conceptualisation of esports labour.

The labour of professional game play

The labour of a game's players is at the core of esports. Games played at a professional level have an extremely narrow apex of professional players and an extremely broad base of amateur, recreational and leisure players (Esports Earnings, 2021; Riot Games, 2016b). This has led to the growth of amateur and micro-tournament platforms, with over tens of thousands of tournaments held and many millions of players involved. In esports the broad-based pyramidal structure of amateurs, semi-professionals, and professionals is necessary in order to generate sufficient interest, income and profitability to support the top-level players. It is not sufficient to simply be a top player in a particular game; that game must have a large community of players to ensure both that the required skill levels are genuinely extremely high (the top player in a game only a few people play is unlikely to be as skilled as the top player in a game played by millions), and that there are enough players potentially interested in viewing play at the highest levels and aspiring to those levels themselves. The ecosystem of a potential Esport game is therefore predicated upon the existence of a suitably large and dedicated player base, and the labour of every person in that playerbase – no matter how low in the game's skill rankings – contributes to the transformation of that game into a viable Esport.

To compete at the highest levels professional players must be able to carry out many layers of complex demanding actions (Hilvoorde and Pot, 2016; Witkowski, 2012). This labour is highly demanding in physical terms – often requiring 300–400 actions a minute to be sustained over a long period (Lewis et al., 2011) and response times of a fraction of a second, comparable to those of professional fighter pilots (Russell, 2010) – and in mental and psychological terms, requiring an ability to innovate and explore the possibilities of the game's mechanics in a process known as theory crafting (Ferrari, 2013b; Kow and Young, 2013), make complex strategic decisions (Wagner, 2006), and predict or assess the moves of one's opponent. Theory crafting (in many ways akin to chess analysis) involves players who are not at that moment in a competitive context studying a game to discover previously-unknown tricks, strategies or tactics, combinations of units or items or abilities players have not previously considered, moves based on 'timings' (how far into a match one is), and much else besides, which can then be used in a later competitive context. Such strategic work is itself a form of labour (Agha, 2015: 65) and the competition between two or more such highly-skilled players provides the fundamental spectacle of esports. In turn, as noted previously, the top players provide an example for the aspiring (and much larger number of) other players of the games in question, boosting a game's appeal and visibility, and its ongoing financial viability, and therefore support by its developer. These forms of labour are closely interwoven and mutually supportive and constitutive.

In addition to this skilled, performative, and what one might term inspirational labour, there is also immense effort required behind the scenes to support high-level competition ability. Reliably carrying out skilled actions and making strong tactical and strategic decisions requires practice, termed training by Witkowski (2013) and drilling by Ferrari (2013a), which transforms the navigation of unexpected moments and in-game scenarios into learned and embodied decision-making and physical capabilities (Taylor, 2012: 59). This takes place largely behind-the-scenes. Players may sometimes live in team houses, a practice that first emerged in South Korea. This allows them to focus full-time on practising with their teams and against each other at an appropriate high competitive level. While providing a stable training environment it may also add to performance pressure: there is intense competition from below but very large rewards for the few that can make it. As this paper has shown many forms of esports labour are comparable to, or adapted from, industries such as television and physical sports, but the labour of the professional gamer is unique in various ways that demand closer attention, to which this work now turns.

The precariousness of being a pro

A precarious labour situation characterises esports careers, whether as a professional gamer or broadcaster (to the greatest extent) or the other careers described here (to a lesser extent). This is heightened in those for whom esports are their main income source. Respondents spoke to the effort and workload required to reach and sustain a profitable highest level esports career. R6 stated that anyone aspiring to success in any domain of esports, but especially as a player or commentator, must be ‘prepared for sacrifice, [and] be prepared that it will consume your life. Be prepared to do everything you can to succeed [. . .] and not just give up one or two things, give up everything’. This was echoed by R7, who said of esports commentary that ‘it’s the kind of job that really does permeate your lifestyle entirely’, and R10, who said that to achieve success in this area was to ‘basically almost kill myself’ with workload, effort, and minimal sleep. These echo our other findings (Johnson & Woodcock, 2017b) on the workloads and work-life balances of professional game streamers, those who broadcast games for a living but do so at a non-esports level; these respondents emphasised the high degree of dedication and ‘sacrifice’ required to reach the top of the pyramid. This is closely connected not just to labour patterns, but also to the precariousness of these jobs. Respondents stressed that the lack of formality and intensity of competition (cf. Li, 2017) meant that it’s a ‘brutal business’ (R6), a concept which R10 developed further, explaining that ‘there’s a lot of fighting for the top positions, so if you don’t have the skills [or] talent, you’re probably not going to get [there]’. These top positions require a lot of work not just because they require a lot of knowledge, comfort in front of the camera, and so forth, but because all other aspirants must also be bettered. This creates a strong sense of precariousness for professional gamers and broadcasters, constantly aware that others desire their positions, that the games they have built a career on might cease to be viable esports, that the work ethic described above must be maintained, and so forth.

The professional gamers are thus simultaneously integral to professional gaming, yet also its most precarious labourers. Why is this? Firstly, as in physical sports, youth has the edge. World-class gamers do not maintain their highest abilities past the age of 30 (Gera, 2014; Winkle, 2015), leaving professional gamers in the same form of career uncertainty as professional physical sports players, but with far lower career earnings or public profiles, and fewer options for future employment in other sectors (such as television, charity, endorsements, and the like). Although there have been recent moves to ensure that the careers of esports players continue after their retirement from professional competition (Gera, 2014) through tutoring newer players, career options post-

retirement remain limited, making it a risky long-term career choice even for those able to make a living from gameplay whilst young.

Secondly, tournament income is a major source of earnings for professional gamers, and this varies significantly with time and the scale and scope of tournaments; as a consequence, some esports companies have begun paying their players a modest salary in lieu of taking a proportion of tournament earnings, but this remains a comparatively rare arrangement. For all but a few, therefore, victory in tournaments is the primary method for acquiring financial security. This can influence their gameplay – professional gaming's focus on discrete tournaments with widely varying prize-pools and visibilities leads to the creation of new strategies that may be held back until the 'right' time (Taylor, 2012: 95) as a way to maximise the chance of tournament success (and thereby profile and income).

Thirdly, again as in physical sports, there is room for very few players at the top, and there are common 'labour disputes and conflicts within professional teams' (Agha, 2015: 11); tens of thousands of players commit to the pursuit of professional play as a career, but the majority fall short of the exacting standards of world-class skilled play. Even once a top level of gameplay is achieved, many are trying to break into a market able to support only a finite number of professional gamers, making the maintenance of high-level play ability just as fraught with risk as its initial attainment. Professional gamers are therefore simultaneously the most precarious component of the ecosystem of professional gaming labour, and the most essential. Or to put it another way: top-level players as a demographic are essential, but specific top-level players seem far less important, even while the most visible esports players do contribute to driving endorsements, sponsorships, and so forth. While some of this is analogous to the precariousness of professional football players (Roderick, 2006), esports introduces a number of new dynamics. The bargain made with capital is both exploitative and short-term, reflecting the current tendency in contemporary political economy to shift the 'power' balance away from labour, whether in production, services, or other new forms of work.

Although perhaps initially unaware of the overall labour characteristics of the professional gaming career – given their backgrounds in video game play rather than employment and business – players do become aware of its precariousness as time passes. Respondents talked to us about the precariousness of their activities, the level of competition, and the 'behind-the-scenes' work required to ensure career viability. Long-time players (and commentators and other workers) are likely quite attuned to the labour aspects of their careers – the proof of this is that they are still professional players. Those who are unable to find a way to ensure the steady continued earnings from professional esports gaming will simply cease to be professional players, even if their in-game skill is very high. They also know the questionable long-term viability of a career path where youth correlates so strongly with success, and this is why many have found new ways to diversify into live streaming their own gameplay (alongside the broadcast of tournaments in which they are participants), or into managerial or coaching roles. Younger or newer players tend not to have such longer-term plans – at least not publicly – and focus entirely on their gameplay, relying on the emerging systems of esports professionalisation to keep them afloat. More research into player experiences and life-story would help to flesh out these initial observations and secure a broader understanding of esports labour.

Given the high labour and lifestyle demands to achieve a precarious career, why do professional gamers do it? This is a rich field for future empirical research. The authors propose several initial hypotheses here. The most readily apparent is the enjoyment of play, and the attendant desire to maximise playtime and minimise worktime. The appeal of evading the strictures of traditional

models of work (Hardt and Negri, 2001; Kirkpatrick, 2013) is a strong enticement towards playing for a living, and appears to be a significant draw for many professional gamers. In a context of widespread labour alienation, playful labour appears to be a rare opportunity for self-actualisation (Seo, 2016). The post-Fordist refusal of work has shaped the development of video games as a whole (Dyer-Witheford and De Peuter, 2009; Kirkpatrick, 2013) and this process continues with the professionalisation of esports. This 'refusal of work' (Hardt and Negri, 2001: 204), while 'in itself [. . .] empty', is a symptom of the failure of capitalism to provide work that people want to do. There is a risk of imbuing this flight from standardised employment with a broader anti-work politics that is not currently being expressed, and it is important to remember that 'their lines of flight from authority are completely solitary', and do not currently take a collective or organised form. However, there is also a strong attendant aspirational quality here (cf. Johnson et al, 2019) and one that esports branders play to in their depictions of their players and the nature of the profession. Equally, significant pressure from within gaming culture, where skill is a trait that yields tremendous social and cultural cachet (Simon, 2007; Wang and Sun, 2011), pushes players towards the path of professional gaming.

As a final point, it is important to connect these varying forms of paid and unpaid labour back into the broader industry context. For the professional player, the escape from the wage relation comes with a bargain. Professional player labour is co-opted by advertisers, sponsors, team organisations, and most importantly by games companies themselves, who reconstitute the spectacle of world-class play as a means of publicising their games and boosting sales. Through the work of these actors, 'players who engage with material products are then made to be products themselves' (Fletcher, 2020: 2675) which can be circulated and marketed appropriately. Nevertheless, for the professionals at the top of the player pyramid even reaching these heights is a short-lived and precarious achievement. There are exponentially larger numbers of individuals below them who are needed to support both the professionalisation and the influx of interest from advertising. The shifts in media consumption that accompany the growth in the popularity of esports place both players and audiences (often made up of amateur players) at the centre of a new struggle for advertising space and realisation of profits. Thus by tracing the value chains and labour processes that combine to create the contemporary phenomenon of global esports, we gain broader insights into how both work and play are being transformed in contemporary capitalism.

Conclusion: the esports labour ecosystem

Forms of play have been captured and (re)produced by capital for centuries, but profit from the spectacle of play has, until recently, been almost exclusively limited to the viewership of physical sports. Yet the motivations for esports consumption are often very comparable to those for traditional sports consumption (Brown et al., 2018), and professional gaming and esports have now been identified as a new play spectacle with economic potential. This new labour system has injected large amounts of capital into esports and boosted the number of individuals able to make a living from gameplay, but at the expense of shaping the work in the interests of capital. In aspiring to make a living through playing computer games at a world-class level, all in this ecosystem must accept the demands and requirements of a wide network of other actors, who are in many cases unconcerned by and uninterested in gaming communities and the life and labour experiences of professional players (or broadcasters, or developers). This rapid global economic growth of esports is beginning to affect more than just the players and competitors, creating new labour processes and forms of work, while drawing on and transforming pre-existing ones. There are new career options,

redefinitions of work and leisure, the emergence of large subcultures, and vast profits to be made by a range of involved actors, all of which merit scholarly attention.

In this paper we have sought to offer an overview of the most important labour elements of esports. We did so by drawing upon player observation and original interview data. The paper then explored labour within game development and the production of patches based on user experience data to maintain a viable competitive game; the roles of organisational and technical skill in the construction of the esports phenomenon, both remaking old roles and creating new ones; the importance of advertising and sponsorship to the esports ecosystem, and how these shape and inform the labour of other actors; and the roles of broadcasters, both professional and non-professional, who commentate on and raise the visibility of esports games. We explored in detail the labour relations of contemporary esports players, who support themselves through play reconstituted as work, but a form of work that is highly precarious and dependent in large part upon the continued availability of tournament winnings and third-party sponsorships. A core tension is identified between the impulse of players to play at a professional level and the aspirational qualities of such a desire, and the intentions of other economic actors involved in esports. Players have to accommodate many demands in order to realise such a career, in many cases obviating the playful qualities of gameplay which encouraged them into the career in the first place, and having their labour captured by other actors in the ecosystem. Building upon existing literature and supplementing it with insights from our own ongoing research, this paper has explored how an activity once considered marginal and niche has grown into a complex global entertainment phenomenon. The emerging value chains that have sprung up around esports combine industrial and digital labour across a global labour arbitrage. Each of these is a component part of the larger esports industry and shaped by the competing interests of labour and capital. In the middle of this world are the professional gamers, who labour precariously on behalf of these other actors as well as themselves, in the process finding their playful leisure activities transformed into something far closer to traditional forms of work. The next task is to trace how these processes shape esports in the coming decades, who loses and wins as a result of this emerging shape, and whether esports is laying the foundations for a long-term sustainable industry or merely one which extracts maximum value from the labour of its players whilst leaving them without viable long-term employment options when their competitive lustre fades.

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